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John Phillips, F.R.S.
St. Mary's Lodge.
York.

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PRESERVATIVE

FOR THE PRESERVATION OF FISH

BY LAGUE

OF THE

FISH COMMISSION, IN
CHARGE OF THE FISH

AND

FOR CURETTS, FISH, AND ARE INCLUDED WITH
IN THE MOST PLAIN AND EASY
MANNER

PUBLISHED BY THE FISH COMMISSION

BY J. H. M. S. WILKINS, M.D.
FISH COMMISSION, PROFESSOR OF FISHERY, AND A
MEMBER OF THE FISH COMMISSION, AND
FISHERY, IN LONDONAND THE FISH COMMISSION, IN LONDON
AND THE FISH COMMISSION, IN LONDON

LONDON

PUBLISHED BY THE FISH COMMISSION, IN LONDON
AND THE FISH COMMISSION, IN LONDON

per 1/4/14

A SHORT
DISCOURSE
 CONCERNING
Pestilential Contagion,
 AND THE
METHODS
 To be used to Prevent it.

By *RICHARD MEAD*, M. D.
 Fellow of the College of Physicians,
 and of the Royal Society.

The SIXTH EDITION.



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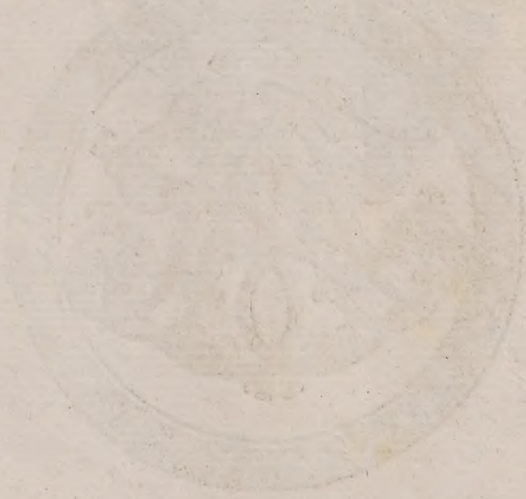
A SHORT

COURSE

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Wellcome Foundation

METHODS



LONDON

Printed for Sam. E. & Co. in New York
No. 10 of the 1st series



TO THE
RIGHT HONOURABLE
James Craggs, Esq;
ONE OF
His MAJESTY'S Principal
Secretaries of State.

S I R,



*Most humbly of-
fer to You my
Thoughts con-
cerning the Pre-
vention of the Plague,
which I have put together
A 2 by*

DEDICATION.

by your Command. As soon as you was pleased to signify to me, in his Majesty's Absence; that their Excellencies the Lords Justices thought it necessary for the Publick Safety, upon the Account of the Sickness now in France, that proper Directions should be drawn up to defend our selves from such a Calamity; I most readily undertook the Task, though upon short Warning, and with little Leisure: I have therefore rather put down the principal Heads of Caution, than a Set of Directions in Form.

THE

DEDICATION.

THE first, which relate to the performing Quarantines, &c. You, who are perfectly versed in the History of Europe, will see are agreeable to what is practised in other Countries, with some new Regulations. The next, concerning the suppressing Infection here, are very different from the Methods taken in former Times among Us, and from what they commonly Do Abroad : But, I persuade my self, will be found agreeable to Reason.

I most

DEDICATION.

I most heartily wish, that the wise Measures, the Government has already taken, and will continue to take, with Regard to the former of these, may make the Rules about the latter unnecessary: However it is fit, we should be always provided with proper Means of Defence against so terrible an Enemy.

May this short Essay be received as one Instance, among many others, of the Care, you always shew for Your Country; and as a Testi-

D E D I C A T I O N.

*Testimony of the great E-
steem and Respect, with
which I have the Honour
to be,*

S I R,

Your most obedient,

Most humble Servant,

Novemb. 25.
1720.

R. M E A D.

1844

1. 1st of Jan. 1844
2. 2nd of Jan. 1844
3. 3rd of Jan. 1844

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20. 20th of Jan. 1844
21. 21st of Jan. 1844



PART I.
OF THE
NATURE
OF
CONTAGION.



THAT the Reasonableness of any Method, which shall be proposed to prevent the spreading of *Contagious* Diseases, may the better appear, it is necessary to premise somewhat in general concerning *Contagion*,

gion, and the Manner, by which it acts.

CONTAGION is propagated by three Causes, *the Air; Diseased Persons; and Goods transported from infected Places.*

WE shall therefore first enquire what alteration of the *Air* it is, that makes it *infectious*; and then, by what Means it communicates its noxious Quality to other Bodies.

THE ancientest and best Authors of Physick, who lived in a Country more exposed to these Calamities than ours, observed the Constitution of the *Air*, which preceded *Pestilential Fevers*, to be great *Heats* attended with much *Rain* and *South-erly Winds**: And one of Them takes particular Notice, that no o-

* Vid. Hypocrat. Epidem. lib. 3.

ther than a *moist* and *hot* Temperament of the *Air* brings the *Plague*; and that the Duration of this Constitution is the Measure of the Violence of the Distemper*.

THE Natural History of several Countries confirms this Observation; in *Africa* particularly, if Showers fall during the sultry Heats of *July* and *August*, the *Plague* ensues thereupon, with which whosoever is infected hardly escapes†.

It has besides been remarked in all Times, that the Stinks of *stagnating Waters* in hot Weather, *putrid Exhalations* from the Earth; and above all, the Corruption of dead *Carcasses* lying unburied, have occasioned *infectious Diseases*.

* Galen. de Temperament. lib. 1 cap. 4. & Comment. in Epid. 1. 3.

† Vide J. Leon. Histor. Afric. lib. 1.

FROM hence it appears to be a *Concurrence* of Causes, that produces Diseases of this Kind ; which must not only meet, but exert their Force together for a considerable time. And when this happens, their first Effect is a Degree of *Stagnation* in the Air, which is afterwards followed by *Corruption* and *Putrefaction*.

AND upon this account it is, that those Countries are chiefly liable to these Calamities, where not only the *Heats* are very great, and the *Weather* continues long in the same State ; but the *Winds* (the Use of which is by Motion to purify the Air) do not shift and change so often as they do in Northern Climates.

INDEED *Plagues* seem to be of the Growth of the *Eastern* and *Southern* Parts

Parts of the World, and to be transmitted from them into colder Climates by the Way of *Commerce*. Nor do I think, that in this *Island* particularly there is any one Instance of a *Pestilential* Disease among us of great Consequence; which we did not receive from other *Infected* Places.

THIS I the rather mention, because it is a common Opinion, and propagated by Authors of great Name, that we are usually *visited* with the *Plague* once in 30 or 40 Years; which is a mere Fancy without any Foundation either in Reason or Experience: and therefore People ought to be delivered from the Subjection to such vain Fears.

ON the contrary, though we have had several Strokes of this kind, yet there are Instances of
bad

bad *Contagions* from abroad being brought over to us, which have proved less malignant here by our Air not being disposed to receive such Impressions.

THE *Sweating Sickness*, called the *Sudor Anglicus* and *Febris Ephemera Britannica*, because it was commonly thought to have taken its Rise here, was most probably of a foreign Original, and no other than a *Plague* abated in its Violence by the mild Temperament of our Climate.

FOR, we learn from Histories, that the first time this was felt here, which was in the Year 1485, it began in the Army, with which King *Henry VII.* came from *France*, and landed in *Wales* *; and it was then thought to have been brought

* Vid. Caium de Febre Ephemera Britannica.

into *France* from the famous Siege of *Rhodes* by the *Turks* 3 or 4 Years before. And of the four Returns, which this has made since that Time; two, viz. *those* in the Years 1527, and 1528, may very justly be suspected to have been owing to the *Pestilence*, which at those Times raged in *Italy*, particularly at *Florence* and *Naples*†. And the others were very probably from a *Turkish* Infection.

I call this Distemper a *Plague* with lessened Force, because the Symptoms of it were of that kind, though in a less Degree; as great *Faintness* and *Inquietudes*, inward *Burning*, *Pain* in the *Head*, a *Delirium*, &c. All which were accompanied with profuse *Sweats*, and the Disease lasted but 24 hours. And

† Vid. Rondinelli Contagio in Firenze, & Summonte Histor. di Napoli.

though

though for want of Care, and due Management many died of it; yet as a learned and wise *Historian* * observes, *It appeared rather to be a surprize of Nature than obstinate to Remedies, for if the Patient was kept warm with temperate Cordials, he commonly recovered.*

AND I cannot but take Notice, as a Confirmation of what I have been advancing, that we had here the same kind of Fever in the Year 1713, about the Month of *September*, which was called the *Dunkirk Fever*, as being brought by our Soldiers from that Place; where it was indeed a Malignant Disease attended with a *Diarrhœa*, *Vomiting*, &c. and probably had its Original from the Pestilential Distemper, which some time before broke

* *Lord Verulam's History of Henry VII.*

out at *Dantzick* and *Hamburg*: But with us was much more mild, beginning only with a Pain in the Head, and by very easy Means went off in large *Sweats*, after a Day's Confinement.

THERE being in every Air a greater Disposition to *Contagion* at one Time than another, we have indeed sometimes felt this Calamity with greater Fury; as particularly the last time in the Year 1665; when it continued in this *City* about ten Months, and swept away by computation 97306 Persons: But it was generally allowed, that the *Contagion* came by *Cotton* imported from *Turkey**; and the long Duration of it, I believe, may justly be charged upon the unhappy Management of infected Houses, which

* Vide Hodges de Peste.

was then directed by publick Authority; as I shall shew anon.

AND the History of the most terrible of all the Plagues, that ever were in these Parts of the World, which was that in the Year 1349, gives a manifest Proof from whence all *Europe* may trace the Origine of these Evils, viz. from *Asia*: for † This taking its Rise in *China* in the Year 1346, advanced through the East *Indies* to *Syria*, *Turkey*, *Ægypt*, *Greece*, *Africa*, &c. In 1347 some Ships from the *Levant* carried it to *Sicily*, *Pisa*, *Genoa*, &c. In 1348 it got into *Savoy*, *Provence*, *Dauphiny*, *Catalonia*, *Castile*, &c. In 1349 it seized *England*, *Scotland*, *Ireland*, and *Flanders*; and in the next place *Germany*, *Hungary*, and *Denmark*; and in all

† Vid. Histor. Florent. di Matteo Villani.

(II)

these Countries made most incredible Havock.

BUT to return to the Consideration of the Air, which we left in a putrid State: It is to be observed, that Putrefaction is a kind of Fermentation, and that all Bodies in a Ferment emit a volatile active Spirit, of Power to agitate, and put into intestine Motions, that is, to change the Nature of other Fluids into which it insinuates it self.

IT were easy to shew from the best *Theory* of Fevers*, how the Alterations made in the *Blood* this Way will favour *Pestilential* Diseases, by rendring the Body obnoxious to them: But the Digression would be too great.

* Vid. Bellini de Febrib.

THIS is one step towards *Contagion*. The next, as it seems to me, proceeds after this Manner. The Blood in all *Malignant Fevers*, especially *Pestilential* ones, at the latter End of the Disease, does like Fermenting Liquors throw off a great Quantity of active Particles upon the several *Glands* of the Body, particularly upon those of the Mouth and Skin, from which the Secretions are naturally the most constant and large. These, in *Pestilential* Cases, although the Air be in a right State, will generally infect those, who are very near to the sick Person; otherwise are soon dispersed and lost: But when in an evil Disposition of *This* they meet with the subtle Parts, its Corruption has generated, by uniting with them they become much more active and powerful, and likewise
more

more durable and lasting, so as to form an *Infectious Matter* capable of conveying the Mischief to a great Distance from the diseased Body, out of which it was produced.

THEY who know what strange Attractions and Combinations are made by volatile Spirits will understand this Reasoning; especially if they consider, how easily all kinds of *Effluvia* are diffused in a warm Air, such as we have described an Infectious one to be; and further, of how penetrating a Force the finest Parts of Animal Juices are; of which the strange Stench of a mortified Limb, upon a Body yet living, will convince any one.

A corrupted State of Air is without doubt necessary to give these *Contagious Atoms* their full Force; for otherwise it were not easy to conceive

conceive how the *Plague*, when once it had seized any Place, should ever cease, but with the Destruction of all the Inhabitants: Which is readily accounted for by supposing an Emendation of the Qualities of the Air, and the restoring of it to a healthy State capable of dissipating and suppressing the Malignity.

ON the other hand it is evident, that *Infection* is not received from the Air it self, however predisposed, without the Concurrence of something emitted from *Infected Persons*; because, by strictly preventing all Intercourse of Infected Places with the Neighbourhood, it may be effectually kept from spreading: Whereas the least Wind must necessarily convey whatever noxious Quality resides in the Air alone, even to a great Distance. Of this
we

we have had a fresh Proof in the present unhappy *Plague* in *France*, which, by keeping careful Guard, was confined for a considerable Time within the Walls of *Marseilles*; so that none of the adjacent Villages suffered any thing by it; till at length some Persons finding Means to escape carried the Infection along with them. And we find, they have been able, by the like Care, still to restrain it within moderate Bounds.

THIS is the Manner by which Infectious *Effluvia* are generated: The Way, by which a sound Person receives the Injury, I suppose most commonly to be this. These *Contagious* Particles being drawn in with the Air we breath, they taint in their Passage the *Salival* Juices, which being swallowed down into the Stomach presently fix their Malignity

lignity there ; as appears from the *Nausea* and *Vomiting*, with which the Distemper often begins its first Attacks. Though I make no Question but the *Blood* is also more immediately affected by hurtful Particles being mixed through Inspiration with it in the Lungs.

THE third Way, by which we mentioned *Contagion* to be spread, is by *Goods transported from infected Places*. It has been thought so difficult to explain the Manner of *this*, that some Authors have imagined *Infection* to be performed by the Means of *Insects*, the *Eggs* of which may be conveyed from Place to Place, and make the Disease when they come to be *hatched*. As this is a supposition grounded upon no manner of Observation, so I think there is no need to have Recourse to it. If, as we have conjectured,

jectured, the *Matter of Contagion* be an active Substance, perhaps in the Nature of a *Salt*, generated chiefly from the Corruption of a *Humane Body*, it is not hard to conceive how this may be lodged and preserved in soft, porous Bodies, which are kept pressed close together.

WE all know how long a time *Perfumes* hold their *Scent*, if wrapt up in proper Coverings: And it is very remarkable, that the strongest of these, like the *Matter* we are treating of, are mostly *Animal Juices*, as *Mosch*, *Civet*, &c. and that the Substances found most fit to keep them in, are the very same with those which are most apt to receive and communicate *Infection*, as, *Furrs*, *Feathers*, *Silk*, *Hair*, *Wool*, *Cotton*, *Flax*, &c. the greatest Part of which are likewise of

D the

the Animal Kind ; which Remark alone may serve to lead Us a little into the true Nature of *Contagion*.


FROM all that has been said, it appears, I think, very plainly, that the *Plague* is a real Poison, which being bred in the Eastern or Southern Parts of the World, maintains it self there by circulating from *Infected* Persons to Goods ; which is chiefly owing to the Negligence of the People in those Countries, who are stupidly Careless in this Affair : That when the Constitution of the Air happens to favour Infection, it rages there with great Violence ; That at that Time more especially diseased Persons give it to one another, and *Contagious Matter* is lodged in Goods of a loose and soft Texture, which being packt up, and carried into other Countries, let out, when opened, the imprisoned

soned Seeds of Contagion : And lastly, That the Air cannot diffuse and spread these to any great Distance, if Intercourse and Commerce with the Place infected be strictly prevented.





PART II.
OF THE
METHODS
TO PREVENT
CONTAGION.

S it is a satisfaction to know, that the *Plague* is not a Native of our Country, so this is likewise an Encouragement to the utmost Diligence in finding out Means to keep our selves clear from It.

THIS

THIS Caution consists of two Parts: *The preventing its being brought into our Island*; And, if such a Calamity should happen, *The putting a stop to its spreading among us.*

THE first of these is provided for by the established Method of obliging Ships, that come from *Infected* Places, to perform *Quarentine*: As to which I think it necessary, that the following Rules be observed.

NEAR to our several Ports, there should be *Lazarettos* built in convenient Places, on little Islands if it can so be, for the Reception both of Men and Goods, which arrive from Places suspected of *Infection*: The keeping Men in *Quarentine* on board the Ship being not sufficient;

cient; the only Use of which is to observe whether any dye among them. For *Infection* may be preserved so long in Cloaths, in which it is once lodged, that as much, nay more of it, if Sickness continues in the Ship, may be brought on Shore at the End than at the beginning of the 40 Days: Unless a new *Quarentine* be begun every time any Person dies; which might not end, but with the Destruction of the whole Ship's Crew.

IF there has been any *Contagious* Distemper in the Ship; The *Sound* Men should leave their Cloaths; which should be burnt; the Men washed and shaved; and having fresh Cloaths, should stay in the *Lazaretto* 30 or 40 Days. The reason of this is, because Persons may be recovered from a Disease themselves, and yet retain
Matter

Matter of Infection about them a considerable Time ; as we frequently see the *Small-Pox* taken from those, who have several Days before passed through the Distemper.

THE *Sick*, if there be any, should be kept in Houses remote from the *Sound* ; and some time after they are well, should also be washed and shaved, and have fresh Cloaths ; whatever they wore while Sick being burnt : And then being removed to the Houses of the *Sound*, should continue there 30 or 40 Days.

I am particularly careful to destroy the *Cloaths* of the Sick, because they Harbour the very *Quintessence of Contagion*. A very ingenious Author * in his admirable

* Boccaccio Decameron. Giornat. prim.

Description of the *Plague* at *Florence* in the Year 1348, relates what himself saw : That two *Hogs* finding in the Streets the *Rags*, which had been thrown out from off a poor Man dead of the Disease, after snuffling upon them, and tearing them with their Teeth, fell into Convulsions, and dyed in less than an Hour.

IF there has been no Sickness in the Ship, I see no reason why the Men should perform *Quarentine*. Instead of this, they may be washed, and their Cloaths aired in the *Lazaretto*, as Goods, for one Week.

BUT the greatest Danger is from such *Goods*, as are apt to retain Infection, such as *Cotton*, *Hemp* and *Flax*, *Paper* or *Books*, *Silk* of all sorts, *Linen*, *Wool*, *Feathers*, *Hair*, and all kinds of *Skins*. The *Lazaretto*

retto for these should be at a Distance from that for the Men, and they must in convenient Warehouses be unpackt, and exposed, as much as may be, to the fresh Air for 40 Days.

THIS may perhaps seem too long ; but as we don't know how much Time precisely is necessary to purge the Interstices of Spongy Substances from *Infectious Matter* by fresh Air, the Caution cannot be too great in this Point: Unless there could be a Way found out, without hazard- ing Men's Lives, of trying when Bodies have done emitting the Noxious Fumes ; which possibly might be done by putting tender *Animals* near to them, particularly by setting little *Birds* upon the exposed Goods ; because it has been observed in Times of the *Plague*, that the Country has been forsaken

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by

by the *Birds* ; and those kept in Houses have many of them dyed*. But the Use of this Fancy Experience only must shew ; for I am well aware, that all *Plagues* do not indifferently affect all Kinds of living Creatures ; on the contrary, most are confined to a particular *Species* of them ; like the Disease of the *Black Cattle* a few Years since, which neither proved Infectious to other Brutes, nor to Men.

I take it for granted, that the *Goods* should be *open'd*, when they are put into the *Lazaretto*, otherwise their being there will avail nothing. The Misfortune, which happened in the Island of *Bermudas* about 25 Years since, gives a Proof of this ; where, as the Account

* Demerbroeck de Peste, L. 1. C. 4.

has been given me by the learned Dr. *Halley*, a Sack of *Cotton*, put on Shoar by Stealth, lay above a Month without any Prejudice to the People of the House, where it was hid; but when it came to be distributed among the Inhabitants, it carried such a *Contagion* along with it, that the living scarce sufficed to bury the Dead.

INDEED as it has been frequently experienc'd, that of all the Goods, which harbour *Infection*, *Cotton* in particular is the most dangerous, and *Turkey* is almost a perpetual *Seminary* of the *Plague*; I cannot but think it highly reasonable, that whatever *Cotton* is imported from that Part of the World, should at all Times be kept in *Quarentine*; because it may have imbibed *Infection* at the Time of its packing up, notwithstanding no Mischief

has been felt from it by the Ship's Company.

As all reasonable Provisions should be made both for the *Sound* and *Sick*, who perform *Quarentine*; so the strict keeping of it ought to be enforced by the severest *Penalties*. And if a Ship come from any Place, where the *Plague* raged, at the Time of the Ship's Departure from it, with more than usual Violence, it will be the securest Method to *Burn* all the *Goods*, and even the *Ship*.

NOR ought this further Caution to be omitted, That when the *Contagion* has ceased in any Place by the approach of Winter, it will not be safe to open a free Trade with It too soon : Because there are Instances of the *Distemper's* being stopt by the Winter Cold, and yet the Seeds of it not destroyed, but
only

only kept unactive, till the Warmth of the following Spring has given them new Life and Force. Thus in the great Plague at *Genoa* near 60 Years ago, which continued part of two Years; the first Summer about 10000 dyed; the Winter following hardly any; but the Summer after no less than 60000. So likewise the last *Plague* at *London* began the Autumn before the Year 1665, and was stopt during the Winter by a hard Frost of near three Month's Continuance; so that there remained no further Appearance of it till the ensuing Spring *. Now if Goods brought from such a Place should retain any of the latent Contagion, there will be Danger of their producing the same Mischief in the Place, to which they are brought, as they

* Hodges de Peste.

would have caused in that, from whence they came.

BUT above all it is necessary, that the *Clandestine Importing* of Goods be punished with the utmost Rigour ; from which wicked Practice I should at this Time apprehend more Danger of bringing the *Disease* from *France*, than by any other Way whatsoever.

THESE are, I think, the most material Points, to which Regard is to be had in defending ourselves against *Contagion* from other Countries. The particular Manner of putting these Directions in Execution, as the *Visiting* of *Ships*, *Regulation* of *Lazaretto's*, &c. I leave to proper Officers, who ought sometimes to be assisted herein by able Physicians.

THE next Consideration is, What to do in Case, through a Miscarriage in the publick Care, by the Neglect of Officers, or otherwise, such a Calamity should be suffered to befall us.

THERE is no *Evil* in the World, in which the great Rule of *Resisting the Beginning*, more properly takes place, than in the present Case ; and yet it has unfortunately happened, that the common Steps formerly taken have had a direct Tendency to hinder the putting *this Maxim* in Practice.

As the *Plague* always breaks out in some particular Place, it is certain, that the Directions of the *Civil Magistrate* ought to be such, as to make it as much for the Interest of Families to discover their
Mis-

Misfortune, as it is, when a House is on *Fire*, to call in the Assistance of the Neighbourhood : Whereas on the contrary, the Methods taken by the Publick, on such Occasions, have always had the Appearance of a severe *Discipline*, and even *Punishment*, rather than of a *Compassionate Care* : Which must naturally make the *Infected* conceal the Disease as long as was possible.

THE main Import of the *Orders* issued out at these Times was, As soon as it was found, that any House was infected, to keep it shut up, with a *large red Cross*, and *Lord have Mercy upon us* on the Door ; and Watchmen attending Day and Night to prevent any one's going in or out, except *Physicians, Surgeons, Apothecaries, Nurses, Searchers, &c.* allowed by Authority : And this to continue at least a Month

Month after all the Family was *dead or recovered* *.

IT is not easy to conceive a more dismal Scene of Misery, than this; Families seized with a Distemper, which the most of any in the World requires Help and Comfort, lockt up from all their Acquaintance; lest it may be to the Treatment of an inhumane Nurse (for such are often found at these Times about the Sick;) and Strangers to every thing but the Melancholy sight of the Progress, Death makes among themselves; with small Hopes of Life, and those mixed with Anxiety and Doubt, whether it be not better to Dye, than to survive the Loss of their best Friends, and nearest Relations.

* Vid. *Directions for the Cure of the Plague, by the College of Physicians; and Orders by the Lord Mayor and Aldermen of London, published 1665.*

IF *Fear, Despair*, and all *Dejection of Spirits* dispose the Body to receive *Contagion*, and give it a great Power, where it is received, as all Physicians agree they do, I don't see how a Disease can be more enforced, than by such a Treatment.

NOTHING can justify such *Cruelty*, but the Plea, that it is for the Good of the whole *Community*, and prevents the spreading of *Infection*. But this upon due Consideration will be found quite otherwise: For while *Contagion* is kept nursed up in a House, and Continually encreased by the daily Conquests it makes, it is Impossible but the *Air* should by Decrees become *tainted*, which by opening Windows, &c. will carry the Malignity first from House to House; and

and then from one Street to another. The shutting up Houses in this Manner is only keeping so many *Seminaries of Contagion*, sooner or later to be dispersed abroad: For the waiting a Month, or longer, from the Death of the last Patient will avail no more, than keeping a *Bale* of infected *Goods* unpack'd; the Poyson will fly out, whenever the *Pandora's Box* is opened.

As these Measures were owing to the Ignorance of the true Nature of *Contagion*, so they did, I firmly believe, contribute very much to the long Continuance of the *Plague*, every time they have been practis'd in this City: And no doubt they have had as ill Effects in other Countries.

IT is therefore no wonder, that great Complaints were sometimes

made here against this unreasonable Usage; which, when they prevailed so far, as to procure some Release for the *Sick*, were remarkably followed with an Abatement of the Disease. The *Plague* in the Year 1636 began with great Violence, but Leave being given by the King's Authority for People to quit their Houses; it was observed, That *not one in twenty of the well Persons removed fell Sick, nor, one in ten of the Sick dyed**. Which single Instance alone, had there been no other, should have been of Weight ever after to determine the Magistracy against too strict Confinements. But besides this, a preceding *Plague*, viz. in the Year 1625, affords us another Instance of a very remarkable Decrease upon the discontinuing to

* Discourse upon the Air, by Tho. Cock.

Shut up Houses. It was indeed so late in the Year, before this was done, that the near Approach of Winter was doubtless one Reason for the Diminution of the Disease, which followed: Yet this was so very great, that it is at least past dispute, that the Liberty then permitted was no Impediment to it: For this *opening* of the Houses was allowed of in the beginning of *September*; and whereas the last Week in *August*, there dyed no less than 4218, the very next Week the *Burials* were diminished to 3344, and in no longer time than to the fourth Week after, to 852 *.

SINCE therefore the Management in former Times neither answers the Purpose of *discovering the Beginning of the Infection*, nor of put-

* Vid. *The shutting up of Houses soberly debated.* Anno, 1665.

ting a stop to it when *Discovered*, other Measures are certainly to be taken ; which I think should be of this Nature.

INSTEAD of *ignorant old Women*, who are generally appointed *Searchers* in Parishes to enquire what Diseases People dye of, That Office should be committed to *Understanding and Diligent Men*, whose Business it should be, as soon as they find any have dyed after an uncommon Manner, particularly with *livid Spots, Buboes, or Carbuncles*, to give Notice thereof to the Magistrates ; who should immediately send skilful Physicians to Visit the Houses in the Neighbourhood, especially of the *Poorer* sort, among whom this Evil generally begins ; and if upon their Report it appears, that a *Pestilential Distemper* is broke out among the Inhabitants,

habitants, They should without Delay order all the Families, in which the Sickness is, to be *Removed*; The *Sick* to different Places from the *Sound*; but the Houses for both should be three or four Miles out of Town; and the *Sound* People should be *stript of all their Cloaths*, and *washed and shaved*, before they go into their new Lodgings.

No Manner of *Compassion* and *Care* should be wanting to the *Diseased*; to whom, being now in *clean* and *airy* Habitations, there would, with due Cautions, be no great Danger in giving Attendance. All Expences should be paid by the Publick, and no Charges ought to be thought great, which are counterbalanced with the saving a Nation from the greatest of Calamities. Nor does it seem to me at all unreasonable,

reasonable, that a *Reward* should be given to the Person, that makes the first Discovery of *Infection* in any Place; since it is undeniable that the making known the *Evil* to those, who are provided with proper Methods against it, is the first and main Step towards the overcoming it.

WHEN the *Sick Families* are gone, all the Goods of the Houses, in which they were, should be *burnt*; nay the Houses themselves, if that can conveniently be done. And after this all possible Care ought still to be taken to remove whatever Causes are found to breed and promote *Contagion*. In order to this, the *Overseers* of the Poor (who might be assisted herein by other Officers) should visit the Dwellings of all the meaner sort of the Inhabitants, and where they find them

them *stifled up too close and nasty*, should lessen their Number by sending some into better Lodgings, and should take Care, by all Manner of Provision and Encouragement, to make them more *cleanly and sweet*.

No good Work carries its own Reward with it so much as this kind of *Charity*; and therefore be the Expence what it will, it must never be thought unreasonable. For nothing approaches so near to the first Original of *Contagion*, as Air pent up, loaded with Damps, and corrupted with the Filthiness, that proceeds from *Animal Bodies*.

OUR common *Prisons* afford us an Instance of this, in which very few escape, what they call the *Goal Fever*, which is always attended with a Degree of *Malignity*

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ty in proportion to the *Clofeness* and *Stench* of the Place: And it would certainly very well become the Wisdom of the Government, as well with Regard to the Health of the *Town*, as in Compassion to the *Prisoners*, to take Care, that all *Houses of Confinement* should be kept as Airy and Clean, as is consistent with the Use, to which they are designed.

THE *Black Affize* at *Oxford*, held in the Castle there in the Year 1577, will never be forgot*; at which the *Judges*, *Gentry*, and almost all that were present, to the Number of 300, were killed by a *poysonous Steam*, thought by some to have broke forth from the *Earth*; but by a *noble and great Philosopher*†

* *Camden. Annal. Regin. Elizab.*

† *Lord Verulam, Natural History, Cent. 10. Num. 194.*

more justly supposed to have been brought by the *Prisoners* out of the *Goal* into *Court* ; it being observed, that they alone were not injured by it.

AT the same time, that this Care is taken of *Houses*, the proper Officers should be strictly charged to see that the *Streets* be washed and kept clean from *Filth*, *Carrion*, and all Manner of *Nusances* ; which should be carried away in the *Night Time* ; nor should the *Laystalls* be suffered to be too near the City. *Beggars* and *Idle Persons* should be taken up, and such miserable Objects, as are neither fit for the common *Hospitals*, nor *Work-houses*, should be provided for in an *Hospital of Incurables*.

ORDERS indeed of this kind are necessary to be observed at all times,

especially in populous Cities; and therefore I am sorry to take Notice, that in *these* of *London* and *Westminster* there is no good *Police* established in these Respects; for want of which the Citizens and Gentry are every Day annoyed more ways than one.

IF these early *Precautions*, we have mentioned, take Effect, there will be no need of any Methods for *Correcting the Air*, *Purifying Houses*, or of *Rules for preserving particular Persons from Infection*: To all which, if the *Plague* get head, so that the *Sick* are too many to be removed, Regard must be had.

As to the *first*; *Fire* has been almost universally recommended for this Purpose, both by the Ancients and Moderns; who have advised to make frequent and numerous

rous *Fires* in the Towns infected: By which Means, it is said, *Hippocrates* preserved *Greece* from a *Plague*, which was entring into it from *Æthiopia* *. And it is certain, that some evil Dispositions of the Air, particularly such as proceed from *Damps*, *Exhalations*, &c. may be corrected by *Fire*, and the Predisposition of it to receive *Infection* from these Causes sometimes removed. But when the Distemper is actually *begun*, and rages, since it is known to be *spread* and *increased* by the *Heat* of the *Summer*, and on the contrary checked by the *cold* in *Winter*; undoubtedly, whatever increases that *Heat* will so far add Force to the Disease. Whether the Service, *Fires* may do by correcting any other ill Qualities of the Air, will

* Galen. de Theriac. cap. 16.

counterbalance the Inconvenience upon this Account, Experience only can determine; and the Fatal success of the Tryals made here in the last *Plague*, is more than sufficient to discourage any further Attempts of this Nature; for *Fires* being ordered in all the *Streets* for three Days together, there dyed in one Night following no less than 4000; whereas in any single Week before or after, not much above three times that Number were carryed off†.

WHAT has been said of *Fires*, is likewise to be understood of *firing of Guns*, which some have too rashly advised. The proper Correction of the Air would be to make it *fresh* and *cool*. Accordingly the

† Hodges *de Peste*, pag. 24.

*Arabians**, who were best acquainted with the Nature of *Pestilences*, advise People to keep themselves as *airy* as possible, and to chuse Dwellings exposed to the Wind.

FOR keeping *Houses* cool, they took to be the best Method of *purifying* them; and therefore to answer this End more fully, they directed to strew them with *cooling* Herbs, as *Roses*, *Violets*, *Water-Lillies*, &c. and to be washed with *Water* and *Vinegar*; than all which, especially the last, nothing more proper can be proposed: Though it be directly contrary to what Modern Authors mostly advise, which is to make Fumes with hot Things, as *Benzoin*, *Frankincense*, *Asa Fœtida*, *Storax*, &c. from which I see no reason to expect any Virtue

* Rhazes de re Medica, lib. 10. c. 16.

to destroy the Matter of *Infection*, or to keep particular Places from a Disposition to receive it; which are the only things here to be aimed at. The *Smoak* of *Sulphur*, perhaps, as it abounds with an *Acid Spirit*, which is found by Experience to be very *penetrating*, and to have a great Power to repress *Fermentations*, may promise some Service this way. But it is of more Consequence to be observed, that as *Nastiness* is a great Source of *Infection*, so *Cleanliness* is the greatest Preservative: Which is the true Reason, why the Poor are most obnoxious to Disasters of this Kind.

THE next thing after the *purifying of Houses*, is to consider by what Means particular *Persons* may best defend themselves against *Contagion*; for the effectual doing of which it would be necessary to put the
Humour

Humours of the *Body* into such a State, as not to be alterable by the *Matter of Infection*. But since this is no more to be hoped for, than a *Specific Preservative* from the *Small-Pox*; the most that can be done, will be to keep the *Body* in such Order, that it may suffer as little as possible. The *first Step* towards which, is to maintain a good State of Health, in which we are always least liable to suffer by any external Injuries; and not to weaken the *Body* by Evacuations. The *next* is, to guard against all *Dejection of Spirits*, and *immoderate Passions*; for these we daily observe do expose Persons to the more common *Contagion* of the *Small-Pox*. These Ends will be best answered by living with Temperance upon a good generous Diet, and avoiding *Fastings, Watchings, extreme Weariness,*

ness, &c. *Another* Defence is, to use whatever Means are proper to keep the *Blood* from *Inflaming*. This, if it does not secure from *contracting Infection*, will at least make the *Effects* of it less violent. The most proper Means for this, according to the Advice of the *Arabian* Physicians, is the repeated Use of *acid Fruits*, as *Pomegranates*, *Sevil Oranges*, *Lemons*, *tart Apples*, &c. But above all of *Wine-Vinegar* in small Quantities, rendered grateful to the Stomach by the Infusion of some such Ingredients as *Gentian Root*, *Galangal*, *Zedoary*, *Juniper Berries*, &c. Which Medicines by correcting the *Vinegar*, and taking off some ill Effects it might otherwise have upon the Stomach, will be of good Use: But these, and all other hot *Aromatic* Drugs, though much recommended

mended by Authors, if used alone, are most likely to do hurt by *over heating* the Blood.

BUT since none of these Methods promise any certain Protection; as *leaving* the Place infected is the surest *Preservative*, so the next to it, is to avoid, as much as may be, the *near Approach* to the Sick, or to such as have but *lately Recovered*. For the greater Security herein, it will be advisable to avoid all *Crouds of People*. Nay it should be the Care of the *Magistrate* to prohibit all unnecessary *Assemblies*; and likewise to oblige all, who get over the Disease, to *Confine* themselves for some time, before they appear abroad.

THE Advice to keep at a Distance from the Sick, is also to be understood of the *Dead Bodies*:

which should be *buried* at as great a Distance from Dwelling Houses, as may be; put *deep* in the Earth; and *covered* with the exactest Care. They should likewise be *carried out* in the *Night*, while they are yet fresh and free from Putrefaction: Because a Carcass not yet beginning to Corrupt, if kept from the Heat of the Day, hardly emits any kind of Steam or Vapour.

As for those, who must of necessity attend the *Sick*; some further Directions should be added for their Use. These may be comprehended in two short Precepts. *One* is, not to *swallow their Spittle* while they are about the *Sick*, but rather to *spit* it out: *The other*, not so much as to *draw in their Breath*, when they are very near them. The reason for both these appears from what has been said above concerning

cerning the Manner, in which a sound Person receives the Infection. But in case it be too difficult constantly to comply with these *Cautions*, The *holding* to the *Nostrils* a *Sponge* wet with *Vinegar*, may in some measure supply their place.

THIS is the Sum of what I think most likely to stop the Progress of the *Disease* in any Place, where it shall have got Admittance. If some few of these *Rules* refer more particularly to the City of *London*, with small Alteration they may be applied to any other *Place*. It now remains therefore only to lay down some Directions to hinder the *Distemper's* spreading from *Town* to *Town*. The best Method for which, where it can be done, is to cast up a *Line* about the *Town infected*, at a convenient Distance; and by placing a *Guard*, to hinder

der People's passing from it without due Regulation, to other Towns: But not absolutely to forbid any to withdraw themselves, as they have now done in *France*, according to the usual Practice abroad; which is an unnecessary Severity, not to call it a Cruelty. I think it will be enough, if all, who desire to pass the *Line*, be permitted to do it, upon Condition they first perform *Quarentine* for about 20 Days in *Tents*, or other more convenient *Habitations*. But the greatest Care must be taken, that none pass without conforming themselves to this Order, both by keeping diligent *Watch*, and by *punishing* with the utmost Severity, any that shall either have done so, or attempt it. And the better to discover *such*, it will be requisite to oblige all, who travel in any Part of the Country, under the same Penalties,

Penalties, to carry with them *Certificates* either of their coming from Places not *Infected*, or of their passing the *Line* by permission.

THIS I take to be a more effectual Method to keep the *Infection* from spreading, than the absolute refusing a Passage to People upon any Terms. For when Men are in such imminent Danger of their Lives, where they are; many, no doubt, if not otherwise allowed to escape, will use Endeavours to do it secretly, let the Hazard be ever so great. And it can hardly be, but some will succeed in their Attempts; as we see fell out in *France* notwithstanding all their Care. But one that gets off thus clandestinely, will be more likely to carry the Distemper with him, than twenty, nay a hundred, that go away under

der the preceding Restrictions: Especially because the *Infection* of the Place, he flies from, will by this Management be rendered much more intense. For confining People, and shutting them up together in great Numbers, will make the Distemper rage with augmented Force, even to the increasing it beyond what can be easily imagined; As appears from the *Account*, which the learned *Gassendus* * has given us of a memorable *Plague*, which happened at *Digne* in *Provence*, where he lived, in the Year 1619. This was so terrible, that in one *Summer* out of *ten thousand* Inhabitants, it left but *fifteen hundred*, and of them all but *five or six* had gone through the *Disease*. And he assigns *this*, as the princi-

* Notitia Ecclesiæ Diniensis.

pal Cause of the great Destruction, That the Citizens were too closely confined, and not suffered so much as to go to their Country Houses. Whereas in another *Pestilence*, which broke out in the same Place a year and half after, more Liberty being allowed, there did not dye above *one hundred* Persons.

FOR these Reasons, I think, to allow People with proper *Cautions* to remove from an infected Place, is the best Means to suppress the *Contagion*, as well as the most humane Treatment of the present Sufferers: But though Liberty ought to be given to the *People*, yet no sort of *Goods* must by any means be suffered to be carried over the *Line*, which are made of *Materials* retentive of *Infection*. For in the present Case, when *Infection* has seized any Part of a
I Country,

Country, much greater Care ought to be taken, that no *Seeds* of the *Contagion* be conveyed about, than when the Distemper is at a great Distance; because a *Bale of Goods*, which shall have imbibed the *Contagious Aura* when packt up in *Turkey*, or any remote Parts; yet, when unpackt here, may chance to meet with so healthful a Temperament of our Air, that it shall not do much hurt. But when the Air of any one of our Towns shall be so corrupted, as to spread and maintain the *Pestilence* in it, there will be little reason to believe, that the Air of the rest of the Country is in a much better State.

FOR the same Reason *Quarantines* should more strictly be enjoined, when the *Plague* is in a bordering Kingdom, than when it is more remote.

I have

I have now gone through the chief Branches of *Preservation* against the *Plague*. And shall only add, that if the *Burning of Goods*, which has been proposed, be thought any Way *offensive* or *inconvenient*, The *Burying* of them six Feet, or more, under Ground may answer the Purpose as well.

WHAT has been said of the *Nature of Contagion*, upon which the foregoing Directions are grounded, may also be of Use towards establishing a better Method of *Cure*, than *Authors* have commonly taught: But to engage in this is beyond the present Design.

F I N I S.

I have now given you the
chief branches of the
great system of the
world, and it is the
will of the Lord that
you may be able to
understand the
mystery of the
kingdom of God.

What has been said of the
kingdom of God, you will
find in the scriptures, and
may also find in the
writings of the
ancient sages, and
in the words of the
prophets, and in the
teaching of the
apostles.

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